

## **Proposed Cleanup Plan for the Pulgas Mixed-Use Project Site, East Palo Alto is Available for Public Review**

**June 2006**

### **SUMMARY**

This fact sheet, prepared by the Regional Water Quality Control Board, San Francisco Bay Region (Water Board), describes a proposed environmental cleanup plan for the Pulgas Mixed-Use Project site, located in the Ravenswood Industrial Area of East Palo Alto. The proposed cleanup plan responds in part to site cleanup orders adopted by the Water Board in 1992. The Water Board is now holding a 30-day public comment period, from June 22 through July 22, 2006, on the proposed cleanup plan. An e-copy of the proposed cleanup plan and this fact sheet are available at: [http://www.waterboards.ca.gov/sanfranciscobay/pub\\_notice.htm](http://www.waterboards.ca.gov/sanfranciscobay/pub_notice.htm).

The proposed cleanup plan takes into account, but is not dependent upon, the proposed redevelopment of the property into residential, live-work and industrial uses. It calls for removing polluted soil to stringent cleanup levels that would allow unrestricted use of land within the proposed residential and live-work portions of the project. For the industrial portion of the site, a combination of soil removal and capping with building or asphalt is being proposed to address polluted soil. A groundwater plume originating from offsite is present beneath the majority of the site. The proposed cleanup plan calls for natural processes to degrade this polluted groundwater to eventually restore groundwater quality. As the shallow groundwater beneath the site is not being used for drinking water, it is not necessary to achieve cleanup objectives immediately. In order to insure that the underlying groundwater does not cause any potential health concerns until such time as cleanup objectives have been met, engineering controls will be incorporated into building designs that will prevent vapors from the groundwater moving up into buildings. In addition, an environmental deed restriction will insure that no wells are installed on the site and that the industrial portion of the site is never used for sensitive uses, such as homes, schools, hospitals, etc. The proposed cleanup plan is summarized in more detail below.

### **INTRODUCTION**

This fact sheet has been prepared by the Water Board to inform the community about the environmental impacts and proposed cleanup work that is being done in conjunction with the redevelopment of certain properties within the Ravenswood Industrial Area. The Water Board is a part of the California Environmental Protection Agency and is the regulatory agency responsible for overseeing the environmental investigations and cleanup work of these properties.

We invite all interested parties to be part of a public participation and involvement process for the proposed environmental cleanup activities described in this fact sheet.

A 30-day public comment period on this Proposed Cleanup Plan is being held from June 22 through July 22, 2006. A community meeting to present the Proposed Cleanup Plan, answer questions and solicit public comment will be held at the time and place indicated on the last page of this document.

A glossary of technical terms used in this fact sheet is included on pages 6-7. Words in the glossary are printed in *italics* the first time they appear in this fact sheet.

## **ABOUT THE PULGAS MIXED-USE PROJECT**

The Pulgas Mixed-Use Project site consists of ten parcels that are known as the Peck & O'Connor, O'Connor Trust (formerly Bishop), Chang, Bains, Ravenswood Investments and Peterson properties (some properties contain multiple parcels). The properties total 7.99 acres (approximately 5 acres on the west side of Pulgas Avenue and 3 acres on the east side) and are all currently zoned for light industrial use. The properties can be identified on Figure 1.

The developers of the Pulgas Mixed-Use Project site have submitted a proposal to the City of East Palo Alto to redevelop the properties into 44 single family homes, 7 live-work units and 22 industrial condominiums. The industrial condominiums will be built on the east side of Pulgas Avenue, on the Bains and Peterson properties. The 7 live-work and 44 single family homes will be on the west side of Pulgas Avenue. The proposed development layout is presented on Figure 2. For purposes of environmental investigation and cleanup, the Water Board considers the west side of Pulgas Avenue to be residential use, requiring the highest degree of cleanup, and the east side to be industrial use, which requires a less stringent level.

The proposed cleanup plan described in this fact sheet will protect human health and the environment and will allow for the development to move forward, should the City of East Palo Alto approve of the project.

## **SITE HISTORY**

### **Residential Portion, West of Pulgas Avenue**

The Peck & O'Connor and O'Connor Trust properties consist of three parcels; one is identified as 2477 Pulgas Avenue (O'Connor Trust property) and two are identified as 2485 Pulgas Avenue (Peck & O'Connor property). The Peck and O'Connor portion of the site has been used for storage and concrete form manufacturing by a concrete construction contractor (Peck and Hiller) since 1963. Before that time, the site was used for agricultural purposes with row crops, a vineyard and greenhouses at various times. The O'Connor Trust portion of the site was used by a floor covering company in 1958, a carpet service in 1959-61, and Bishop Insulation from 1963 to 1973. In 1973 the then-existing buildings were torn down and the property has been undeveloped to the present day, with the exception of some Peck & Hiller

office trailers. For simplicity, the Peck & O'Connor and O'Connor Trust properties will be referred to collectively as the Peck property for the remainder of this fact sheet.

The Chang property consists of an approximately 1.25-acre undeveloped parcel at 1860 Bay Road, located behind the property at 1836 Bay Road that is commonly known as "People's Plaza." The Chang property was used for agricultural purposes from 1948 to 1963. Then part of it was an auto-wrecking and salvage yard for an unknown period of time, and it has more recently been used for storage for many years.

### **Industrial Portion, East of Pulgas Avenue**

The approximately 1.08-acre Bains and Ravenswood Investments properties consist of three parcels and a portion of a fourth and are located at 2470 Pulgas Avenue. The properties may have been used for agricultural purposes until about 1965, and a residential structure formerly on the properties was removed in the early 1960s. Since 1965, the property has been undeveloped and largely used for truck and trailer parking and storage by Bains Moving and Storage. For simplicity, the Bains and Ravenswood Investments properties will be referred to collectively as the Bains property for the remainder of this fact sheet.

The 1.95-acre Peterson property is located at 1950 Bay Road and is bounded by Bay Road to the northwest, Pulgas Avenue to the southwest, the Bains property to the southeast, and a vacant warehouse to the northeast. It is an undeveloped dirt lot formerly used by a trucking company for parking and storage, and the eastern ¼ of the property is paved. The property may have been used for agricultural purposes in the 1940s and 1950s, and was used intermittently as an auto storage/wrecking yard prior to its use for truck parking and storage.

### **ENVIRONMENTAL CONDITIONS AND INVESTIGATIONS**

The properties in the Pulgas Mixed-Use Project site as well as other properties within the Ravenswood Industrial Area have been in agricultural or industrial uses for 60 or more years. As a result of these uses, residual chemicals have been released to the environment, impacting soil and/or *groundwater*. Environmental investigations of some properties within the Ravenswood Industrial Area began as early as the late 1970s. Since that time investigations and cleanups have been ongoing.

In 2004 and 2005, environmental investigations of all of the properties were conducted on behalf of the developers of the Pulgas Mixed-Use Project. The investigations included background and historical research to identify site uses, on-site chemical releases and known or potential off-site contamination; soil and groundwater sampling and analysis for contaminants from potential on-site and off-site sources, including *organochlorine pesticides*, *arsenic* and other metals, *petroleum hydrocarbons* (also referred to as TPH) and *volatile organic compounds* (also referred to as VOCs); and *soil vapor* sampling and analysis for potential VOC volatilization from known area-wide VOC contamination in shallow ground water. *Human Health Risk Assessments* were completed for identified contaminants of concern.

As a result of these investigations, the following substances were detected above applicable residential or commercial screening levels developed by the Water Board:

### **Residential Portion, West of Pulgas Avenue**

Peck Property – TPH and metals in the soil; VOCs and TPH in groundwater, and VOCs in the soil vapor;

Chang Property – VOCs in the groundwater and soil vapor;

### **Industrial Portion, East of Pulgas Avenue**

Bains Property – TPH, metals and *dieldrin* in the soil; VOCs and metals in the groundwater; VOCs in the soil vapor;

Peterson Property – TPH, *lead* and other metals in the fill soil (soil added at some point in time); metals in the soil; metals, VOCs, TPH and *methyl tertiary butyl ether* (MTBE) in the groundwater; and VOCs in soil vapor.

## **CLEANUP GOALS**

Data collected from the project properties were compared to applicable *Environmental Screening Levels* (also referred to as ESLs) developed by the Water Board. ESLs have been developed for both industrial and residential uses. The industrial ESLs were used for the east side of Pulgas Avenue and the residential for the west. In addition, ground water analytical data were compared to the *Drinking Water Maximum Contaminant Levels* (also referred to as MCLs).

### **Soil**

As previously mentioned, the soil cleanup goals for the portion of the project west of Pulgas Avenue will be the residential ESLs. This stringent cleanup goal will allow for unrestricted uses of the property. All soil containing pollutants above these cleanup levels will be removed and disposed of offsite at an appropriate disposal facility.

The soil cleanup goal for the east side of Pulgas Ave. will be the less stringent industrial ESLs. A *deed restriction* will be required to insure that the properties are never used for any sensitive uses (residential, school, hospital, etc.). Also in this case certain polluted soil may be left in place and capped with asphalt or buildings to prevent any contact.

### **Groundwater**

The cleanup goal for underlying groundwater is the Drinking Water MCLs. It is noted that shallow groundwater in the Ravenswood Industrial Area is naturally high in salinity, due to the proximity of the Bay. This water is not currently being used as a drinking water supply and is not likely to be used in the future. Municipal drinking water is provided to the Ravenswood

Industrial Area and there is no need to use underlying groundwater for drinking water purposes. This being the case, cleanup objectives do not need to be met in the immediate-term.

## **REMEDIATION PLAN**

### **Properties West of Pulgas Avenue (Peck and Chang)**

The Proposed Cleanup Plan identifies areas of soil pollution with metals, TPH and potentially VOCs on the Peck property. These areas of soil will be further assessed and removed to meet unrestricted use cleanup goals. The soil will be disposed of offsite at an appropriate facility. The Plan also calls for removing any float TPH in groundwater within the area of the former underground fuel storage tank area on the Peck property encountered during the additional assessment.

### **Properties East of Pulgas Avenue (Bains and Peterson)**

The Proposed Cleanup Plan identifies an area of lead impacted soil on the Peterson property. This area will be excavated and disposed offsite at an appropriate disposal facility. If soil contaminated with TPH is encountered, the soil will also be excavated and transported off-site to a disposal facility. Soil impacted with lower concentration metals and pesticides will be left in-place and capped. Based on the current redevelopment plans for the Pulgas Mixed-Use Project, the Bains and Peterson properties, asphalt parking, concrete curbs and walkways, and commercial/industrial buildings will cover nearly 100 percent of the properties. This construction will effectively cap the properties, which will prevent direct contact with impacted soils.

Since this remediation plan calls for leaving impacted soil in-place, an environmental deed restriction and associated *risk-management plan* for the property is required. This will be developed in conjunction with the Water Board and City of East Palo Alto. The restriction will prohibit, at a minimum, disturbance to the cap and intrusion into the impacted soil. In addition, it would also restrict the property to commercial/industrial use and prevent sensitive uses (schools, homes, hospitals, etc.). This document will be incorporated into the *Covenant Condition Restrictions* (also referred to as CCRs) for the project.

### **Properties on Both East and West Sides of Pulgas Avenue**

As previously discussed, most of the Pulgas Mixed-Use Project site is underlain by a groundwater plume polluted with VOCs from offsite and possibly onsite sources. The cleanup plan for this groundwater pollution calls for allowing natural processes to degrade these pollutants, eventually restoring water quality. As this will not occur in the short-term, mitigation measures are needed to eliminate any potential risk posed by this polluted water until such time as the cleanup goals have been met. The primary health risks caused by exposures to these VOCs are: 1) drinking or coming in contact with this groundwater; and, 2) vapors containing VOCs from this groundwater moving up through the soil and collecting in buildings, where they

can be inhaled. To address these potential risks, until such time as water quality is restored, *vapor barriers* and *passive venting systems* will be installed beneath buildings and solid structures on these properties. The vapor barriers and passive venting will be designed to inhibit the potential migration of contaminant vapors upward into structures. To address risk caused by direct contact with groundwater, an environmental deed restriction will be applied to the entire project to prevent the installation of wells to extract groundwater or disturb the vapor barriers and passive venting systems.

## GLOSSARY

*Arsenic* – Arsenic is a naturally occurring metal found in the earth's crust. Arsenic and its compounds are commonly used as pesticides, herbicides, insecticides, wood preservatives and various metal alloys. Arsenic is a carcinogen, associated with lung cancer and skin cancer, and may also cause damage to the intestines and liver.

*Covenant Condition Restriction (CCR)* – The CCR is an agreement, usually included in the deed to a property, restricting the manner in which the property can be used. For example, a deed for a residential property may contain a covenant that the owner won't permit "noxious uses" on the property, or any of a lengthy list of particular offenses such as stables, factories and so forth. Developers may record a document called "covenants and conditions and restrictions" (CC&Rs) to control the nature and character of a property development for the benefit of future owners.

*Deed Restriction* – A clause in a deed limiting the use of a property.

*Risk-Management Plan* – The risk management plan contains practical ways to mitigate risk for occupants and workers presented by exposure to pollutants that are present in soil and/or groundwater on a property. Such measures often engineering controls (i.e. capping with asphalt or buildings) and institutional controls (deed restrictions, preventing certain uses of a property). This document also serves to disclose site conditions and provide public information.

*Dieldrin* - Dieldrin is an organochlorine pesticide produced for use as a control for insect pests. The chemical Aldrin is closely related to dieldrin, and breaks down to form dieldrin. Dieldrin and Aldrin exposure can affect the nervous system.

*Drinking Water Maximum Contaminant Level (MCL)* – The MCLs are published in the Title 22 California Code of Regulations, and are enforceable regulatory drinking water standards established by the California Department of Health Services. Primary MCLs take in to account a chemical's health risks and include a high margin of safety.

*Environmental Screening Levels (ESLs)* – ESLs are risk-based concentrations developed by the Water Board, and are for use as screening levels in determining if further evaluation is warranted, in prioritizing areas of concern, in establishing initial cleanup goals, and in estimation of potential health risks. For carcinogens, the ESLs are based on a target excess cancer risk of

$10^{-6}$ . This represents the upper (most health protective) end of the potentially acceptable range of  $10^{-4}$  to  $10^{-6}$  recommended by the US Environmental Protection Agency.

*Groundwater* – Groundwater is all water that is below the surface of the ground, and in direct contact with the ground or subsoil, that can be collected with wells, tunnels, or drainage galleries, or that flows naturally to the earth's surface via seeps or springs.

*Human Health Risk Assessment (HHRA)* – The HHRA is a technical study addressing the potential human health impacts to on-site construction workers and future tenants or residents associated with contaminants detected at a site. The HHRA is typically conducted following various United States Environmental Protection Agency (EPA) guidance documents, and considers compound concentrations, transport and fate of the compounds detected, exposure pathways, and property use.

*Lead* – Lead is a naturally occurring metal found in the earth's crust. Lead was commonly used in the production of paint and gasoline, and is still used in certain kinds of batteries. It also is used in some kinds of metal products (such as solder, brass and bronze products, and pipes), and in ceramic glazes. Other chemicals containing lead are used in paint. Lead exposure can cause neurological development problems in children, and may cause cancer.

*Methyl tertiary butyl ether (MTBE)* – MTBE is used as a gasoline additive to increase octane ratings in premium grade fuels, and in higher concentrations (up to 15 percent) to enhance gasoline combustion and reduce tailpipe emissions. MTBE readily dissolves in water, can move rapidly through soils and aquifers, is resistant to microbial decomposition and is difficult to remove in water treatment. The US EPA has classified MTBE as a potential human carcinogen.

*Organochlorine Pesticides* – Organochlorine pesticides are a group of highly toxic compounds typically used to eliminate insect pests, and include DDT, lindane, chlordane, dieldrin, aldrin, heptachlor and toxaphene. These chemicals persist in the environment long after their original use, they degrade slowly, and accumulate in the food chain. Organochlorine pesticides may be carcinogenic, and may cause neurological, reproductive and developmental harm.

*Passive Venting Systems* - Passive venting is a non-mechanized system of dissipating vapors that may accumulate beneath structures that cap the soil, such as commercial and residential buildings. It may consist of a series of perforated pipes placed beneath the structure connected to single or multiple vent pipes that vent to the roof or at ground level.

*Petroleum hydrocarbons* – Total Petroleum Hydrocarbons (TPH) is a term used to describe a broad family of several hundred chemical compounds that originally come from crude oil. TPH can vary in how much of each chemical they contain. TPH-based products include, but are not limited to, gasoline, kerosene, fuel oil, mineral oil, and asphalt.

*Soil Vapor* – Soil vapor is air existing in void spaces in the soil between the groundwater table and the ground surface that may migrate to the soil surface and be released into the atmosphere.

*Vapor Barrier* – A vapor barrier is a material that limits the intrusion of vapors into an area or building. Vapor barriers typically consist of either a solid in the form of a thin sheet that is placed beneath the area or structure, or a liquid that can be brushed or rolled on to a hard surface (such as a foundation) that caps the area or structure.

*Volatile organic compounds (VOCs)* – VOCs are organic liquids, including many common solvents, which readily evaporate at temperatures normally found at ground surface and at shallow depths. Many VOCs are known human carcinogens. Examples of VOC usage include dry cleaning, solvents, carburetor cleaner, brake cleaner, and paint solvents.

*Volatilization* - The release of gas by substances that are solids or liquids at ordinary atmospheric pressure and temperatures.

### **GET INVOLVED! - PUBLIC PARTICIPATION OPPORTUNITIES**

The public comment period on this Proposed Plan will extend from June 22 through July 22, 2006. Your comments to the Water Board are invited. All written and verbal comments received by the Water Board will be considered prior to the selection of a final cleanup plan.

**Copy of Draft Cleanup Plan:** A copy of the Draft Cleanup Plan and this Fact Sheet are available at: [http://www.waterboards.ca.gov/sanfranciscobay/pub\\_notice.htm](http://www.waterboards.ca.gov/sanfranciscobay/pub_notice.htm)

**Written Comments:** Written comments must be e-mailed or postmarked no later than July 22, 2006, should be sent to:

Mark Johnson  
RWQCB  
1515 Clay Street, Suite 1400  
Oakland, CA 94612  
[mjohnson@waterboards.ca.gov](mailto:mjohnson@waterboards.ca.gov)

**Community Meeting:** A public meeting will be held on the Proposed Plan on:

**Date:** Wednesday, June 28, 2006

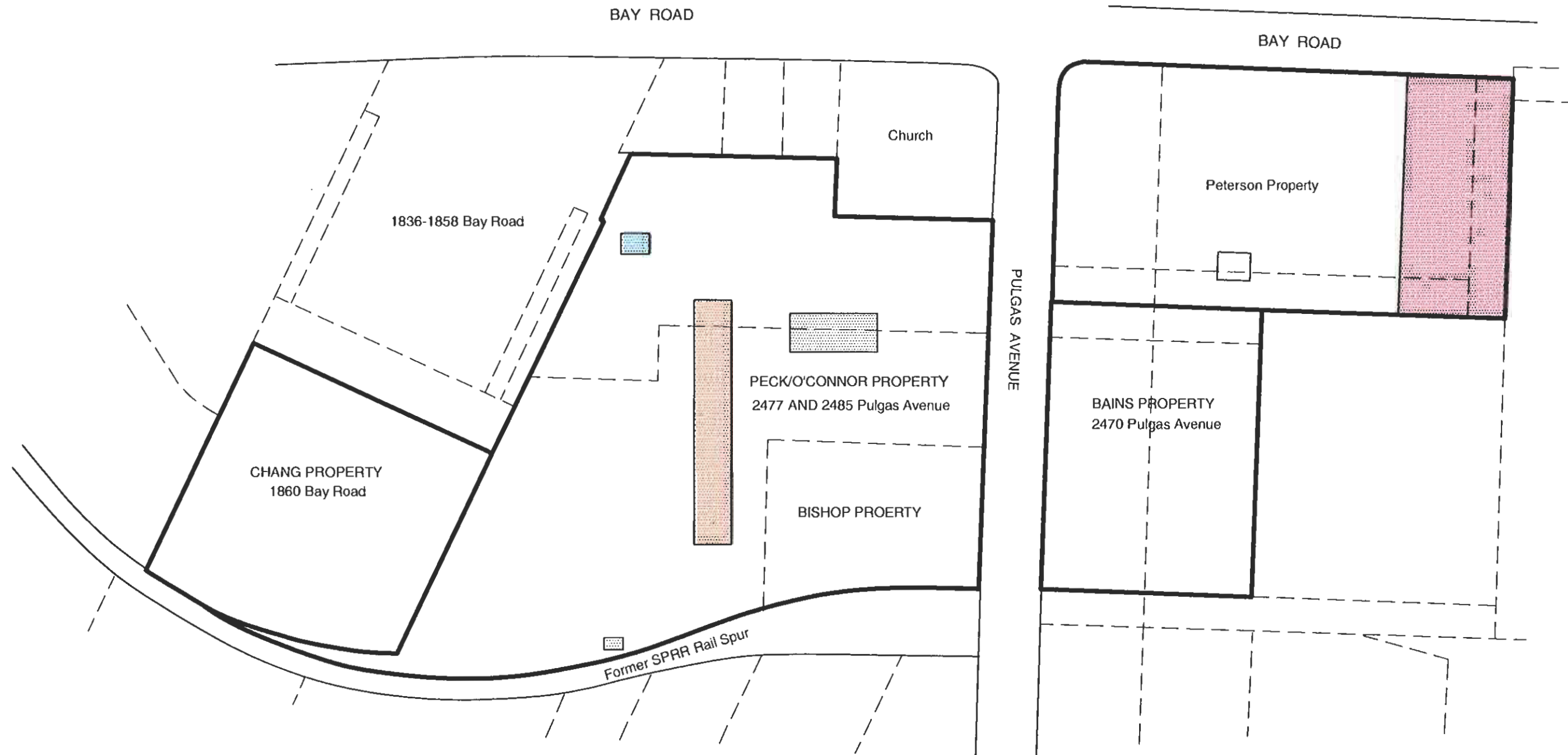
**Time:** 6:30 to 8:00 P.M.

**Address:** 2111B University Avenue, East Palo Alto (near Chevron Station)






**Additional Information:** Documents related to the Pulgas Mixed-Use Project Site are available for public review in the File Room of the Regional Water Quality Control Board's office in Oakland.

**For Further Information:** If you have questions or comments about the Proposed Cleanup Plan, you may call Mark Johnson at (510) 622-2493.





**LEGEND**

-  - Approximate area of elevated chromium
-  - Approximate area of former underground storage tank excavation
-  - Approximate area of former saw location with elevated levels of VOCs in soil vapor
-  - Approximate area of existing asphalt cap for arsenic impacted soil
-  - Approximate area of lead impacted soil



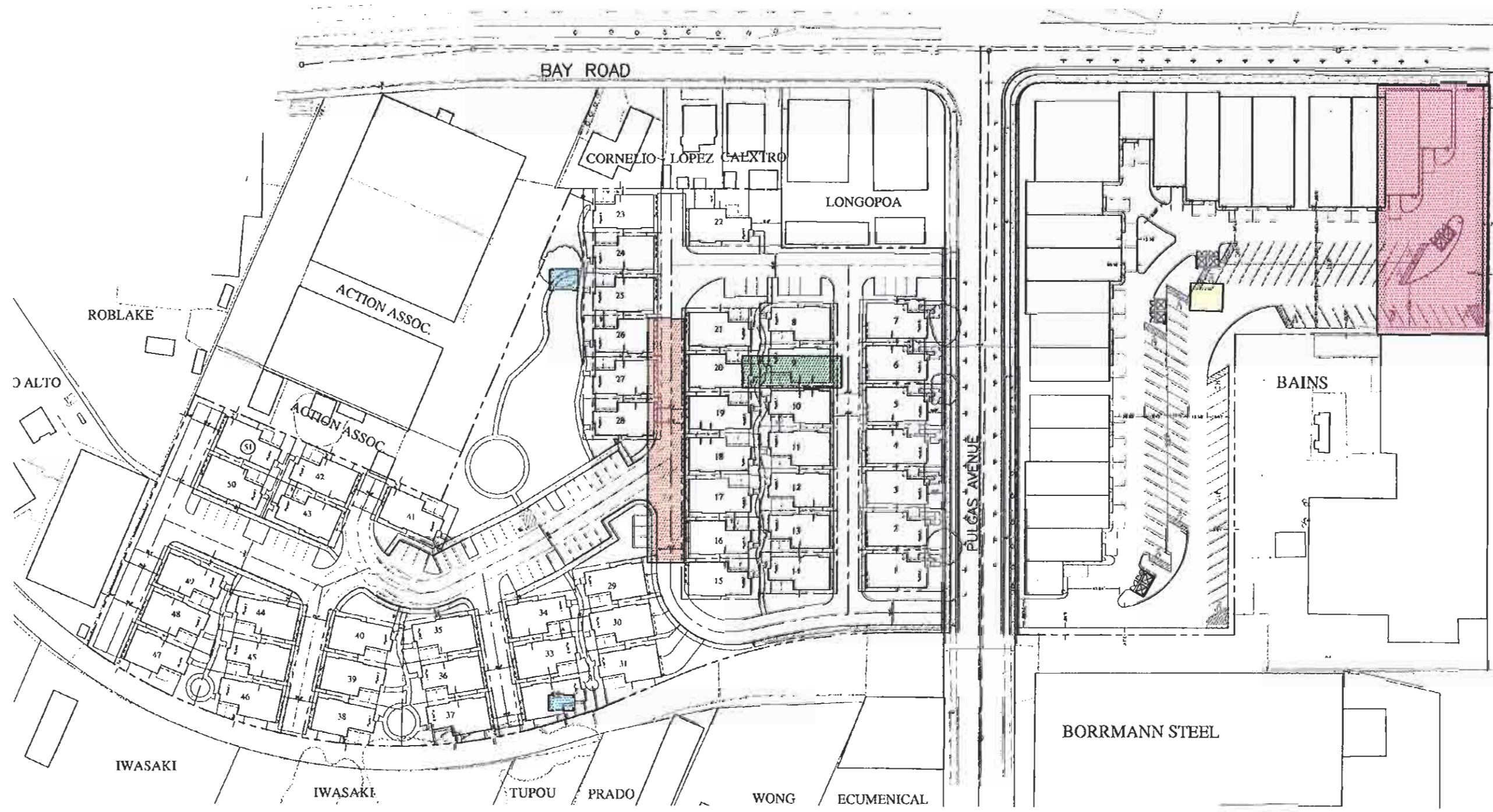
**AREAS OF ENVIRONMENTAL IMPACT**  
PULGAS MIXED-USE PROJECT  
East Palo Alto, California

**TRC Lowney**






**FIGURE 1**

2047-1L

Base by County Parcel Map.



**LEGEND**

-  - Approximate area of elevated chromium
-  - Approximate area of former underground storage tank excavation
-  - Approximate area of former saw location with elevated levels of VOCs in soil vapor
-  - Approximate area of existing asphalt cap for arsenic impacted soil
-  - Approximate area of lead impacted soil

**SITE DEVELOPMENT PLAN**  
**PULGAS MIXED-USE PROJECT**  
East Palo Alto, California

**TRC Lowney**

**FIGURE 2**  
2047-1L

Base by County Parcel Map.